

**SAFETY DATA SHEET**

Revision Date 14-Feb-2020

Revision Number 2

**1. Identification**

**Product Name** Pentafluorothiophenol

**Cat No. :** B22323

**CAS-No** 771-62-0  
**Synonyms** Pentafluorobenzenethiol

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.  
**Details of the supplier of the safety data sheet**

**Company**

Alfa Aesar  
Thermo Fisher Scientific Chemicals, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Tel: 800-343-0660  
Fax: 800-322-4757  
**Email:** tech@alfa.com  
www.alfa.com

**Emergency Telephone Number**

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.  
After normal business hours, call Carechem 24 at (866) 928-0789.

**2. Hazard(s) identification****Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                                  |            |
|--------------------------------------------------|------------|
| Flammable liquids                                | Category 3 |
| Acute oral toxicity                              | Category 4 |
| Acute dermal toxicity                            | Category 4 |
| Acute Inhalation Toxicity - Vapors               | Category 3 |
| Skin Corrosion/Irritation                        | Category 1 |
| Serious Eye Damage/Eye Irritation                | Category 1 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system.              |            |

**Label Elements****Signal Word**

Danger

**Hazard Statements**

Flammable liquid and vapor

Causes severe skin burns and eye damage  
May cause respiratory irritation  
Toxic if inhaled  
Harmful if swallowed or in contact with skin

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Use only outdoors or in a well-ventilated area  
Do not breathe dust/fume/gas/mist/vapors/spray  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Keep cool

**Response**

Immediately call a POISON CENTER or doctor/physician

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Skin**

Wash contaminated clothing before reuse  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Ingestion**

Rinse mouth  
Do NOT induce vomiting

**Fire**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

| Component             | CAS-No   | Weight % |
|-----------------------|----------|----------|
| Pentafluorothiophenol | 771-62-0 | 97       |

### 4. First-aid measures

|                                            |                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>                         | Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.                                                                                                                                                                                                                                                                             |
| <b>Skin Contact</b>                        | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.                                                                                                                                                                                                                                                                |
| <b>Inhalation</b>                          | Remove from exposure, lie down. Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.                                                                                                                                                                                                                          |
| <b>Ingestion</b>                           | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Call a physician immediately. If possible drink milk afterwards.                                                                                                                                                                                                                                        |
| <b>Most important symptoms and effects</b> | Difficulty in breathing. Causes burns by all exposure routes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation |
| <b>Notes to Physician</b>                  | Treat symptomatically                                                                                                                                                                                                                                                                                                                                                                                         |

## 5. Fire-fighting measures

|                                         |                                                                              |
|-----------------------------------------|------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>     | Water spray. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Chemical foam. |
| <b>Unsuitable Extinguishing Media</b>   | No information available                                                     |
| <b>Flash Point</b>                      | 51 °C / 123.8 °F                                                             |
| <b>Method -</b>                         | No information available                                                     |
| <b>Autoignition Temperature</b>         | No information available                                                     |
| <b>Explosion Limits</b>                 |                                                                              |
| <b>Upper</b>                            | No data available                                                            |
| <b>Lower</b>                            | No data available                                                            |
| <b>Sensitivity to Mechanical Impact</b> | No information available                                                     |
| <b>Sensitivity to Static Discharge</b>  | No information available                                                     |

**Specific Hazards Arising from the Chemical**  
Flammable.

### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Sulfur oxides. Gaseous hydrogen fluoride (HF).

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

### NFPA

**Health**  
3

**Flammability**  
2

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

|                                             |                                                                                                                                                                                                                                                                                               |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>                 | Ensure adequate ventilation. Use personal protective equipment as required.                                                                                                                                                                                                                   |
| <b>Environmental Precautions</b>            | See Section 12 for additional Ecological Information.                                                                                                                                                                                                                                         |
| <b>Methods for Containment and Clean Up</b> | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Do not let this chemical enter the environment. |

## 7. Handling and storage

|                 |                                                                                                                                                                                                                                                                                                                                            |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | Do not breathe dust. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Handle product only in closed system or provide appropriate exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. |
| <b>Storage</b>  | Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed. Keep away from heat, sparks and flame. Store contents under argon. Corrosives area.                                                                           |

## 8. Exposure controls / personal protection

|                                             |                                                                                                                                                                                                                                                   |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Exposure Guidelines</u></b>           | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.                                                                                                     |
| <b>Engineering Measures</b>                 | Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.                                                                                             |
| <b><u>Personal Protective Equipment</u></b> |                                                                                                                                                                                                                                                   |
| <b>Eye/face Protection</b>                  | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.                                                                       |
| <b>Skin and body protection</b>             | Wear appropriate protective gloves and clothing to prevent skin exposure.                                                                                                                                                                         |
| <b>Respiratory Protection</b>               | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| <b>Hygiene Measures</b>                     | Handle in accordance with good industrial hygiene and safety practice.                                                                                                                                                                            |

## 9. Physical and chemical properties

|                                               |                              |
|-----------------------------------------------|------------------------------|
| <b>Physical State</b>                         | Liquid                       |
| <b>Appearance</b>                             | Colorless                    |
| <b>Odor</b>                                   | Stench                       |
| <b>Odor Threshold</b>                         | No information available     |
| <b>pH</b>                                     | No information available     |
| <b>Melting Point/Range</b>                    | -24 °C / -11.2 °F            |
| <b>Boiling Point/Range</b>                    | 143 °C / 289.4 °F @ 760 mmHg |
| <b>Flash Point</b>                            | 51 °C / 123.8 °F             |
| <b>Evaporation Rate</b>                       | No information available     |
| <b>Flammability (solid,gas)</b>               | No information available     |
| <b>Flammability or explosive limits</b>       |                              |
| Upper                                         | No data available            |
| Lower                                         | No data available            |
| <b>Vapor Pressure</b>                         | No information available     |
| <b>Vapor Density</b>                          | 6.9                          |
| <b>Specific Gravity</b>                       | 1.500                        |
| <b>Solubility</b>                             | No information available     |
| <b>Partition coefficient; n-octanol/water</b> | No data available            |
| <b>Autoignition Temperature</b>               | No information available     |
| <b>Decomposition Temperature</b>              | No information available     |
| <b>Viscosity</b>                              | No information available     |
| <b>Molecular Formula</b>                      | C6 H F5 S                    |
| <b>Molecular Weight</b>                       | 200.13                       |

## 10. Stability and reactivity

|                                         |                                                                                                                                           |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactive Hazard</b>                  | None known, based on information available                                                                                                |
| <b>Stability</b>                        | Stable under normal conditions. Air sensitive.                                                                                            |
| <b>Conditions to Avoid</b>              | Keep away from open flames, hot surfaces and sources of ignition. Exposure to air. Incompatible products. Exposure to moist air or water. |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Strong bases                                                                                                     |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Sulfur oxides, Gaseous hydrogen fluoride (HF)                                    |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.                                                                                                  |
| <b>Hazardous Reactions</b>              | None under normal processing.                                                                                                             |

## 11. Toxicological information

### Acute Toxicity

**Product Information** No acute toxicity information is available for this product

**Component Information**  
**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                        |                                                                                          |
|------------------------|------------------------------------------------------------------------------------------|
| <b>Irritation</b>      | No information available                                                                 |
| <b>Sensitization</b>   | No information available                                                                 |
| <b>Carcinogenicity</b> | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component             | CAS-No   | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-----------------------|----------|------------|------------|------------|------------|------------|
| Pentafluorothiophenol | 771-62-0 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

## 12. Ecological information

**Ecotoxicity**

Do not empty into drains.

**Persistence and Degradability** No information available**Bioaccumulation/ Accumulation** No information available.**Mobility** No information available.**13. Disposal considerations****Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.**14. Transport information****DOT**

|                         |        |
|-------------------------|--------|
| UN-No                   | UN2920 |
| Hazard Class            | 8      |
| Subsidiary Hazard Class | 3      |
| Packing Group           | II     |

**TDG**

|                         |        |
|-------------------------|--------|
| UN-No                   | UN2920 |
| Hazard Class            | 8      |
| Subsidiary Hazard Class | 3      |
| Packing Group           | II     |

**IATA**

|                         |                                      |
|-------------------------|--------------------------------------|
| UN-No                   | UN2920                               |
| Proper Shipping Name    | CORROSIVE LIQUID, FLAMMABLE, N.O.S.* |
| Hazard Class            | 8                                    |
| Subsidiary Hazard Class | 3                                    |
| Packing Group           | II                                   |

**IMDG/IMO**

|                         |                                     |
|-------------------------|-------------------------------------|
| UN-No                   | UN2920                              |
| Proper Shipping Name    | Corrosive liquid, flammable, n.o.s. |
| Hazard Class            | 8                                   |
| Subsidiary Hazard Class | 3                                   |
| Packing Group           | II                                  |

**15. Regulatory information****United States of America Inventory**

| Component             | CAS-No   | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|-----------------------|----------|------|-----------------------------------------------|-----------------------------|
| Pentafluorothiophenol | 771-62-0 | -    | -                                             | -                           |

**Legend:****TSCA** - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - - Not Listed

**TSCA 12(b)** - Notices of Export Not applicable**International Inventories**

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component             | CAS-No   | DSL | NDL | EINECS    | PICCS | ENCS | AICS | IECSC | KECL |
|-----------------------|----------|-----|-----|-----------|-------|------|------|-------|------|
| Pentafluorothiophenol | 771-62-0 | -   | -   | 212-236-3 | -     | -    | -    | -     | -    |

**U.S. Federal Regulations**

|                                                             |                                                             |
|-------------------------------------------------------------|-------------------------------------------------------------|
| <b>SARA 313</b>                                             | Not applicable                                              |
| <b>SARA 311/312 Hazard Categories</b>                       | See section 2 for more information                          |
| <b>CWA (Clean Water Act)</b>                                | Not applicable                                              |
| <b>Clean Air Act</b>                                        | Not applicable                                              |
| <b>OSHA - Occupational Safety and Health Administration</b> | Not applicable                                              |
| <b>CERCLA</b>                                               | Not applicable                                              |
| <b>California Proposition 65</b>                            | This product does not contain any Proposition 65 chemicals. |
| <b>U.S. State Right-to-Know Regulations</b>                 | Not applicable                                              |
| <b>U.S. Department of Transportation</b>                    |                                                             |
| Reportable Quantity (RQ):                                   | N                                                           |
| DOT Marine Pollutant                                        | N                                                           |
| DOT Severe Marine Pollutant                                 | N                                                           |
| <b>U.S. Department of Homeland Security</b>                 | This product does not contain any DHS chemicals.            |

**Other International Regulations**

|                       |                          |
|-----------------------|--------------------------|
| <b>Mexico - Grade</b> | No information available |
|-----------------------|--------------------------|

**16. Other information**

|                         |                                                                                     |
|-------------------------|-------------------------------------------------------------------------------------|
| <b>Prepared By</b>      | Health, Safety and Environmental Department<br>Email: tech@alfa.com<br>www.alfa.com |
| <b>Revision Date</b>    | 14-Feb-2020                                                                         |
| <b>Print Date</b>       | 14-Feb-2020                                                                         |
| <b>Revision Summary</b> | SDS authoring systems update, replaces ChemGes SDS No. 771-62-0/1.                  |

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**